

AGENCY AND ITS DISCONTENTS: A TWO-PROCESS PERSPECTIVE ON BASIC PSYCHOLOGICAL NEEDS AND MOTIVES

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The study of motivation, and motivational processes, has been and remains an extremely important tradition within the field of personality psychology. Those familiar with the field know, however, that motivation research is characterized by widely divergent theoretical perspectives and empirical approaches, often without much integration among these perspectives and approaches. We believe such integration should be possible, given the assumption that humans live in a single “consilient” universe in which any two true facts or theories, formerly examined separately, ultimately must be able to fit together (Wilson, 1998). But what is the way forward toward such consilience?

This chapter describes and presents supporting data for a new *two-process model* of psychological needs (TPM; Sheldon, 2011), showing that it integrates two enduringly important motivation theories, self-determination theory (SDT) and motive disposition theory (MDT), which rarely have been considered together in the past. Indeed, we hope to show that the TPM provides a platform for studying many different motivational processes and dynamics, addressing issues concerning the instigation of behavior, the reward and maintenance of behavior, and the cessation of behavior as well as issues concerning adaptation and coping, subjective well-being, and implicit (nonconscious) versus explicit (conscious) processes. The two processes of the TPM are important motivational mechanisms proposed by MDT and SDT, respectively, and refer to (a) a motivational process, in which an internal force causes the instigation of behavior designed to

get a needed experience; and (b) a reward process, in which behavior is reinforced when it succeeds in obtaining a needed experience. These ideas are considered in detail later in the chapter. The following section begins with some introductory considerations and conundrums.

WHAT IS MOTIVATION?

Motivation can be defined in many ways, but one simple definition is “a state of mind (conscious or nonconscious) that causes people to take action.” Because of some preexisting affective, cognitive, or biological state, a person wants something and goes after it. Accordingly, someone who has “lost his motivation” or “can’t get motivated” is a person who cannot seem to achieve a motivated state of mind and hence cannot take action. For him or her, the practical question is “how can I create or rediscover this state of mind, so that I can do the things I need and want to do?”

Although this depiction of motivation is based on common sense, it raises a host of philosophical issues. Obviously, all behavior is preceded by states of mind; what is special about motivated states of mind? Is motivation just an arbitrary label we apply to a particular category of mental states that may have little to do with actual behavior? Or, does the term actually reference a causal factor in behavior? Can people even be said to “cause themselves” to act because of their “motivation,” or would a legitimate theory of behavior have to look outside of mental states (conscious or nonconscious) for its explanations?

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We would never say that a car “caused itself” to move (Dawkins, 1976); such motion requires a factor independent of the car system—namely, a driver with directional intents and purposes. But to understand human behavior, should the rules of science force us to *omit* any consideration of such a driver inside of the human person? Maybe so, because the notion of a mental driver is reminiscent of the notion of a mental homunculus—that is, a “little person in the head” who resides within but somehow also apart from the mind. This type of dualistic perspective has long been taboo within the psychology and philosophy of mind.

Yet, common-sense notions persist—each of us, every day, perceives ourselves as considering options, weighing information, attending to feelings, and then making plans and choices that guide our subsequent behavior—such that, for the most part, our plans and preferences really do end up being the events that happen. Obviously, such an ability would be an extremely adaptive one for a complex organism to have—the capacity to make and carry out plans presumably provides coherence and internal direction to behavior, enabling the organism to best meet its own needs and hence to thrive. But again, by focusing on this “driver,” or plan maker, are we focusing on a red herring, an inadmissible homunculus?

Agency as a Variable

This chapter takes the position that humans *are* the drivers, although the amount and quality of driving varies within and between individuals (Carver & Scheier, 1981, 1998). More precisely, the self is an evolved executive function (Sedikides & Skowronski, 1997), characterized by subjectivity, that enables people to feel themselves in the world (Damasio, 1999) and thereby make online choices about how to behave in relation to the world (Sheldon, 2004). Thus, feelings of subjective intentionality and self-agency are intertwined intimately with motivation (Bandura, 1989), helping to constitute “states of mind that cause people to take action.” In winning the 2011 U.S. Open tennis title, Novak Djokovic stated, “In big matches, the winner is decided by small margins, a couple points. I guess the winner is the one who believes in victory more.”

Djokovic attributed his win to a particular state of mind: believing, to a sufficient extent, that he can win. Similarly, the American industrialist Henry Ford said, “If you think you can do a thing or think you can’t do a thing, you’re right.”

People do not always feel a sense of self-efficacy and self-knowledge and sometimes feel completely discouraged and confused. And here is the rub: Although felt subjective agency is an extremely useful device, it comes with trade-offs because it makes us vulnerable to the many psychological difficulties that come with the sense of being a self—difficulties well articulated by Hamlet and other would-be agent-selves in literature and film. In the language of SDT (considered in detail in the following section), subjective selves have basic psychological needs, experiences that must be procured for properly self-directed behavior to occur. When basic psychological needs are not met, difficulties are created that can impede or misdirect the motivational process.

A Running Example

Consider the example of Martha, a 30-something midlevel account executive at an insurance company. Martha’s work life is pretty good: She is reasonably successful in her job, exceeding her sales quotas (although there are lingering issues with coworkers). Indeed, ever since she was a child, Martha was rewarded for success in achievement behaviors, starting with crayon contests and moving on to spelling bees, high grades in school, and scholarship competitions. As an adult, she continued to seek out opportunities to solve problems and complete tasks, and in this sense, her job is well suited to her personality. However, Martha’s personal life is not so great—she has few friends in the new city she has been transferred to, she is partially estranged from her mother (they communicate via Martha’s sister), and she has an on-again off-again boyfriend in her old city, who visits only on his own schedule. Martha tells herself she does not care, that she has never been a “people person.”

Return to the mental-driver idea. If we want to predict what Martha will do on a given day, there is probably no better authority than Martha’s planner or online calendar, which contains the set of plans that Martha created for herself for that day, based on

her broader goals within the job context. She executes these plans by implementing various series of behaviors (e.g., open program *x*, do function *y*, call person *z*, edit program *x*), which ultimately are constituted by *test–operate–test–exit* (TOTE) processes (Miller, Galanter, & Pribram, 1960), negative feedback loops (Carver & Scheier, 1998) that function to reduce salient discrepancies between actual and desired states of affairs. More fine-grained plans and behavioral sequences tend to be nested hierarchically under broader plans and purposes, such that the combination of many small successes can lead to a single large success (Carver & Scheier, 1981). A good day for Martha is one in which she accomplishes nearly everything on her calendar, moving her toward her broader career goals (Carver & Scheier, 1990). On such days, her need for achievement is rewarded with feelings of competence and self-efficacy, and she feels a glow of satisfaction that evening.

Sometimes, however, Martha has bad days at work: She fails in her goals, for any of a wide variety of possible reasons. The next day, she typically redoubles her efforts, seeking to make up the difference. Suppose, however, that in the past few weeks, she has been required to work on a team with others, which is a problem for her because she has little patience or desire for relationships. Now, daily failures have been coming more and more frequently—so often that Martha is beginning to become discouraged and depressed. In fact, so lacking is she in recent positive reinforcements that on some mornings she has considerable difficulty even getting out of bed—she feels she has “lost her motivation” for her job, as in the notion that began this chapter. Martha also finds herself drinking more and more in the evenings, even when she is by herself, and just last week, she succumbed to an ill-advised “fling” with a junior employee from another division. If all this keeps up, she ultimately may be fired from her job.

What should Martha do? Perhaps she can do nothing as she spirals deeper into depression. Or perhaps she can muster some kind of resolve—a plan to see a therapist, to return to her old city, to break things off with the boyfriend, to contact her mother directly. Unfortunately, Martha does not

really know who she is anymore, making it difficult to see clearly where things stand in her life, and making it difficult to know what to do even when things do seem clear. She feels stuck.

This simple example is sufficient to illustrate most of the concepts we consider in this chapter, including the nature of basic psychological needs and motives, the origin of individual differences in basic motives, and possible disconnects between needs and motives, such that people’s behaviors do not succeed in meeting needs. Martha’s personality organization and dilemma well represent the types of dilemmas faced by all of us as we negotiate the worlds of work, relationships, and family. In the past, Martha’s recurring striving to bolster and satisfy herself through achievements and accomplishments has worked well, or well enough. Now, however, this source of need satisfaction is failing, and she is finding that she has precious few back-up sources of replenishment and fulfillment.

The following sections address these and related issues, starting with a selective review of two somewhat-contrasting theories of psychological needs: SDT and MDT. We then draw from recent work by Sheldon and colleagues (Sheldon, 2011; Sheldon, Abad, & Hinsch, 2011; Sheldon & Gunz, 2009; Sheldon & Schöler, 2011), suggesting that SDT and MDT can be integrated within a TPM of psychological needs. According to the TPM, psychological needs are a small set of broad evolved action tendencies that have a dual character. Psychological needs supply both motives to acquire certain basic types of experiences, promoting (typically) adaptive behavior, and they reward and reinforce behaviors that succeed in acquiring these experiences. The TPM is described in greater detail after SDT and MDT are introduced.

THE SELF-DETERMINATION THEORY PERSPECTIVE ON PSYCHOLOGICAL NEEDS

SDT (Deci & Ryan, 1985, 2000; Sheldon, Williams, & Joiner, 2003) is an integrated theory of human motivation that has its roots in the concept of *intrinsic motivation*. Intrinsic motivation is the desire to do *X* (play sports, do an assignment, talk to

a friend) because doing X is inherently enjoyable and interesting (Deci, 1971). The concept of intrinsic motivation is difficult to explain using mechanistic or drive theories of behavior because in such theories, behavior is based on reducing endogenous biological deficits (hunger, sleep, thirst) or on receiving exogenous reinforcements (food, prizes, etc.) that are separable from the behavior itself, and neither is the case for intrinsically motivated behavior (Deci & Ryan, 1985). Intrinsic motivation, however, is readily understandable from a cognitive developmental perspective, according to which engagement, play, and exploration are essential drivers of cognitive development as well as essential features of a healthy, happy human being (Fredrickson, 2009; Piaget, 1971; White, 1959). In the SDT view, to have high amounts of intrinsic motivation is to have a healthy agentic self.

Early research in SDT established the *intrinsic motivation undermining effect*, showing that paying people for doing something that was once pleasurable in its own right (i.e., solving engaging puzzles) can reduce subsequent motivation to do that something, as observed during free-choice periods in which people can choose to return to, or not return to, the original activity (Deci, 1971). The undermining effect is opposite what operant behaviorism would predict, since behaviorism would expect behavior to be increased (reinforced) by desirable rewards, not reduced (or made extinct) by them. Undermining effects can be caused not just by proffered rewards and incentives but also by deadlines, criticism or evaluation, surveillance, and ego-involving instructions—anything that distracts attention from the experience itself or reduces the quality of the experience (Deci & Ryan, 1985).

SDT's explanation for the general undermining effect, developed over decades of research, references a new type of reward or reinforcement: namely, basic psychological need satisfaction (Deci & Ryan, 2000, 2008). The early undermining findings were explained mostly with reference to the thwarting of peoples' autonomy needs—that is, peoples' need to perceive themselves as the origin of their own behavior, rather than perceiving themselves as a pawn who is being controlled by other peoples' perceptions or dictates (DeCharms, 1968).

Later research added two other psychological needs to the basic set, resulting in the three basic needs that characterize SDT today: namely, autonomy, competence, and relatedness (Deci & Ryan, 2000). Competence simply means feeling effective, masterful, able to get things done, knowledgeable, and intelligent. Relatedness simply means feeling connected, appreciated, and close with at least some important others. When these three satisfying feelings are present, intrinsic motivation is supported. When the three feelings are denied by the context, then intrinsic motivation is undermined.

According to SDT, these three needs are evolved experiential requirements that characterize all human beings. Psychological needs are like psychological nutrients or psychological vitamins (Sheldon, 2011) that people need to get, just as a plant needs to get certain nutrients (e.g., sun, soil, water) to thrive (Ryan, 1995). Indeed, need satisfaction is said to enable psychological selves to grow to the fullest extent, allowing new organismic integration to occur between different parts of the mind (Ryan, 1995) such that the “mental driver” becomes fully informed about the organism it represents and best able to fulfill its function of further meeting the organism's needs (Sheldon, 2004). Needs research in the SDT tradition has focused on measuring how much people are experiencing these three posited needs, then showing that the three needs each predict unique variance in positive outcomes, such as intrinsic motivation, performance, growth, and well-being, as shown in a host of different contexts, domains, and cultures (see Sheldon, 2011, for a review). It also has been shown that the three SDT needs predict positive well-being better than other “candidate” psychological needs, including popularity or status, money or luxury, security, meaning, health, and pleasure (Sheldon, Elliot, Kim, & Kasser, 2001), suggesting that the latter experiences are not really needed for well-being.

Note the corollary to all of this research: That *not* having these three experiences of autonomy, competence, and social relatedness is enervating, distressing, and even debilitating. A person missing psychological needs would be like a person missing physical needs (food, sleep, water); he or she would be unable to function as well and would be

operating at a disadvantage compared with people with their needs met. But note the paradox that arises: How could a psychological need evolve if its absence leads inexorably toward debilitation, in a nonarrestable downward spiral? Yes, it is great when the social surround affords opportunities to feel autonomous, competent, and related, but when it does not—as is surely inevitable at times—are we helpless to respond?

If psychological needs are truly evolved functional systems, it is more logical to posit that absent needs would spur (at least up to a point) desires to go out and get those needs met. A person who currently feels incompetent should redouble his efforts to solve the problem; a person who currently feels manipulated by others should strive to break free of these social imprisonments; and a person who currently feels isolated and alone should reach out to others, to create or reestablish meaningful bonds with them (Sheldon & Gunz, 2009). To the extent that the thus-acquired feelings of autonomy, competence, and relatedness result from or co-occur with adaptive behavior, then the gene combinations associated with those behaviors should increase within the population until they become part of universal human nature (Tooby & Cosmides, 1990).

Currently, however, SDT has few tools for considering these vital issues—ways of construing people as capable of going out and getting their own needs met, even when their immediate surround and situation does not support their needs at all. This is ironic given SDT's focus on the active agent self, its focus on processes of self-organization, and its focus on internal motivation (Deci & Ryan, 1985). It appears that the extant SDT perspective may be missing something important about the potentially positive effects of unmet needs. How can “discontent” fuel agency?

To illustrate, return to Martha. She currently is missing both competence need satisfaction (on the job) and relatedness need satisfaction (on the job and in her personal life). Does this doom her to a downward spiral toward the depression ward, or can she in some sense reorganize her own life to better meet these crucial psychological needs? Deci and Ryan (2008) discussed the maladaptive “compensatory” desires that can develop when basic needs are

not met, including impulses for addictive substances, for inappropriate material and sensory pleasures, and for self-centered and ego-involved activity. Apparently, Martha is falling prey to some such impulses: Again, is she doomed to a downward spiral toward self-destruction, or can she self-initiate some escape from the process? To address this question, we turn to a different theoretical approach.

The Motive Disposition Theory Perspective on Psychological Needs

MDT is another major theoretical orientation within the field of motivation psychology that relies heavily on the concept of psychological needs. MDT's conception of needs, at least on the surface, is quite different from SDT's conception. According to Henry Murray, a founder of this tradition (1938, pp. 123–124), a psychological need is a “force . . . in the brain region, a force which organizes perception, apperception, intellection, conation and action in such a way as to transform in a certain direction an existing, unsatisfying situation.” In other words, unsatisfying situations spur need forces, which sponsor and regulate action taken to remedy the situation. Using the example of the achievement motive, MDT assumes that when the desired experience (feeling successful and competent) is missing, people high in the achievement motive disposition are especially likely to notice and take action.

A second way motive dispositions can initiate behavior is when individuals anticipate future positive experiences from certain situations. Thus, an individual with a high achievement motive might become especially active when a challenging competition promises the feeling of success and competence. Simply put, then, strong motive dispositions create high sensitivity and responsiveness toward both deficiencies in the desired experience in the present and possible augmentation of that experience in the future. Note that MDT's presumption that action can be initiated by the presence of a deficiency is precisely the dynamic that is not handled well by SDT's needs theory.

McClelland (1965, 1985) and colleagues built on Murray's work by developing various formal measures of individual differences in tendencies to approach various types of incentives. The three

most-studied MDT needs include the need for achievement (to do well in comparison to a standard of excellence), the need for affiliation (to enjoy or cooperate with liked others), and the need for power (to influence or direct the behavior of others). Each of these three motives is assumed to consist of a “hope” (or approach) and a “fear” (or avoidance) component. Whereas hope of success, hope of affiliation, and hope of control are directed toward attaining positive incentives (success, harmonious relationships, and influence), fear of failure, fear of rejection, and fear of weakness are directed toward avoiding negative incentives (failure, social rejection, and powerlessness). Individuals differ in the strength of the hope and fear components, and an overall score for a particular motive often is defined as the approach score minus the avoidance score.

The varying strengths of the achievement, affiliation, and power motives typically are measured using projective tests in which participants’ motives are imputed by content coding the stories they write in response to ambiguous pictures (i.e., the Thematic Apperception Test [TAT]; Morgan & Murray, 1935; Murray, 1938) or the more contemporary Picture Story Exercise (PSE; Schultheiss, 2008; Schultheiss & Pang, 2007). Motive dispositions as measured by the TAT or PSE are said to be implicit (or nonconscious) desires to approach certain classes of rewards and stimuli or to avoid deficiencies in those rewards. Such nonconscious desires may or may not be reflected in people’s explicit self-reports concerning their motive dispositions.

Implicit motive disposition scores have been shown to predict a wide variety of corresponding behaviors. For example, need for achievement (nAch) predicts high performance aspirations but only moderate (diagnostic) risk taking, success in business careers, and self-control. Need for affiliation (nAff) predicts belonging to groups, having many friends, and working in nurturing positions. Need for power (nPow) predicts seeking leadership positions, writing letters to the editor, and getting into arguments (McAdams, 2001). Motive dispositions are thought to have their roots in childhood, such that children who get much experience with “natural incentives” (McClelland, 1985) relevant to

achievement are likely to develop a high nAch, whereas children who instead have many early affiliation experiences are likely to develop a high nAff, and so on.

Again, return to Martha. In the terminology of MDT, it appears that during her childhood Martha developed a relatively high nAch and a relatively low nAff (and perhaps also a low need for intimacy, which is based on a variant scoring system that emphasizes deep rather than garden-variety closeness; McAdams, 1982). This profile of Martha is supported by the fact that she selected a business career (a classic job choice for those high in nAch because it supplies clear goals and clear feedback concerning goals), was willing to move away from her friends to a strange new city in pursuit of her career, and is willing to tolerate uncomfortable relationships with her mother and boyfriend (evidencing low nAff/nInt).

Comparing the MDT and SDT Perspectives

SDT is a theory that emphasizes the importance of acquiring certain basic experiences, as psychological “nutriments” that support healthy agency and positive functioning. Everybody has the same innate basic requirements that, if satisfied, lead to well-being and personal growth but that also can cause ill-being and stagnation if thwarted. Need satisfaction and need thwarting depend mostly on the individual’s (social) environment, which can either facilitate or hinder need satisfaction, affecting how much need satisfaction people get. When an experience goes missing (i.e., the social context does not support it), SDT has given relatively little attention to how unsatisfied needs might serve as the motivational impetus behind people’s behavior. In contrast, MDT is a theory that emphasizes peoples’ differing motives to perform different sorts of behaviors. Everybody has their own motive disposition profile; the causal effect of these profiles upon behavior is the primary focus of study, with relatively little attention being given to the effect of the behaviors upon experience or upon other outcomes. In short, in SDT, needs are *experiential effects* (of supportive environments), whereas in MDT, needs are *motivational causes* (of behavioral initiatives).

SDT and MDT also differ in the set of basic needs on which they focus (but only superficially; see the section Future Research Directions). Whereas SDT says autonomy, competence, and relatedness are the most essential experiential requirements (for everybody), MDT says achievement, affiliation or intimacy, and power are the most essential behavioral motives (which differ across people). SDT and MDT also differ in their focus on conscious versus non-conscious processes; SDT emphasizes the importance of an agentic self getting the conscious experiences it needs to function well, whereas MDT emphasizes the importance of nonconscious impulses that guide peoples' choice of situations and behaviors within the world. Given these many important differences, perhaps it is no surprise that MDT and SDT have received little joint consideration. Again, however, if SDT and MDT are both true theories of psychological needs, then in a consilient universe (Wilson, 1998), they have to fit together somehow.

Integrating SDT and MDT Perspectives on Basic Psychological Needs

We propose that SDT and MDT have been addressing exactly the same process but from different angles: MDT has been examining the front end of a temporal sequence, where psychological needs function as behavioral motives to get certain important experiences, and SDT has been examining the back end of that sequence, where psychological needs function to reward satisfying behavioral choices and to fuel the health and growth of the person. People can differ at the front end in terms of how much they seek out some needs more than others (an individual differences perspective). At the back end, however, need satisfaction has the same effects for everyone (a universal requirements perspective).

To illustrate, consider the parallels between the need for achievement and the need for competence, the need for affiliation and the need for relatedness, and the need for power and the need for autonomy. It is logical that feelings of competence are precisely the inherently desirable experiences that reward achievement strivings, that feelings of relatedness are the inherently desirable experiences that reward affiliation strivings, and that feelings of autonomy

are the experiences that reward power strivings. In this view, adults high in the need for achievement received much early reinforcement for competence-seeking behaviors and came to rely on competence need satisfaction (as does Martha) as a dominant source of their positive well-being. A similar process would have occurred for adults who developed strong motive dispositions for affiliation and for power. This view links MDT and SDT by proposing that the "natural incentives" sought by those high in particular motive dispositions are not nonspecific emotions such as joy, interest, and surprise, as McClelland (1985) suggested, but rather are specific experiences of corresponding need satisfaction that result from such strivings. In line with much SDT research, these three need-satisfying experiences in turn lead to nonspecific positive emotions (Sheldon, 2004) as well as to a variety of other positive outcomes.

Recently, Sheldon and Schöler (2011) provided evidence for this view by showing, in three studies, that the need for achievement (as measured by both implicit and explicit methodologies) was associated uniquely with current competence need satisfaction and that the need for affiliation was associated uniquely with relatedness need satisfaction. This finding was important because it suggests that people with strong motive dispositions actually are getting what they are striving for; this seems logical, or else why would they habitually be striving for it? The finding also indirectly supports the notion that strong motive dispositions develop because of strong early reinforcements in the particular domain. Note, however, that one possibly could have predicted the opposite finding: that motive dispositions should be associated with less of the corresponding experience (why else would you be trying to achieve, except that you feel a lack of competence? Or trying to connect, unless you feel an absence of connection?). What actually emerged in the data instead supported the notion that people develop styles of life that rely disproportionately on particular SDT needs to achieve positive well-being. These styles, on average, tend to work for people. As in the case of Martha's high achievement motivation, however, when a dominant style ceases working, the person may have few resources to fall back on.

Consider the MDT perspective upon Martha's malaise. Again, MDT is an individual differences theory, focusing on variations in chronic motive dispositions as predictors of behavior, and MDT typically does not focus on how those behaviors relate to well-being and other outcomes. Because Martha is low on nAff, MDT would say that her impoverished interpersonal life should not be a problem—she really does not want relationships anyway. Clearly, however, her problematic relationships are part of her difficulties—although she does not like to admit it, Martha feels lonely and isolated. SDT can handle this fact with its assumption that relatedness is a universal need, required by everyone (Baumeister & Leary, 1995). Because Martha is not getting her relatedness need met, she is suffering. Even though Martha does not spontaneously orient toward relatedness experiences (as evidenced by her low nAff score), she still needs them—just as a person who does not eat citrus fruit still needs vitamin C.

Consider Martha's plight in yet another way that is suggested by MDT. Again, MDT distinguishes between implicit motives, as measured by the TAT or PSE, and explicit motives, as typically measured by the self-report Personality Research Form (PRF; Jackson, 1984). Implicit motivation is not necessarily accessible to consciousness, and it influences peoples' spontaneous behavioral choices. Explicit (self-reported) motives are part of peoples' self-concepts, reflecting their beliefs about themselves and influencing their responses on other self-report measures. Studies (Schultheiss & Brunstein, 1999; Elliot & Thrash, 2002; Thrash, Elliot, & Schultheiss, 2007) show that implicit and explicit motivation tend to be uncorrelated or very modestly positively correlated, suggesting that people often "don't really know what they are trying to do"—that is, there can be a disconnect between what their personality actually orients toward and what their conscious self believes about the personality it represents. A variety of recent studies have examined predictors of implicit and explicit motive congruence, using personality variables, such as trait self-determination (Elliot & Thrash, 2002), private body consciousness, self-monitoring, and preference for consistency (Thrash et al., 2007); situational variables, such as prompted use of goal imagery (Schultheiss &

Brunstein, 1999); and personality–situation combinations (state orientation plus situational stress; Baumann, Kaschel, & Kuhl, 2005).

From this perspective, Martha's problem may be that she "doesn't know herself"—in effect, her self-reported motivation does not concur with her actual behavioral motivation. It is certainly plausible that such a disconnection might cause problems for people and research has confirmed the negative effects of motive incongruence on well-being and life satisfaction (e.g., Baumann et al., 2005; Brunstein, Schultheiss, & Grässmann, 1998). Yet, Martha's actual problem seems to be something different. It is not that she *thinks* she is low on nAch, whereas she is really *high* on nAch according to the TAT, and it is not that she *thinks* she is high on nAff, whereas she is really *low* on nAff according to the TAT. Instead, her problem is that she has structured her life in an unbalanced way, relying too much on one need (competence) and ignoring too much another important need (relatedness; Sheldon & Niemiec, 2006). This structure is okay as long as the competence keeps coming in, but when it stops, Martha is left with little psychological sustenance and becomes vulnerable to depression and amotivation. Again, these are the very processes focused on by SDT, suggesting that MDT needs SDT's universalist perspective for a full explanation of psychological needs and their effects.

Yet, SDT also needs the MDT perspective. Remember, because SDT does not focus on unmet needs as motivating behavior, instead focusing on unmet needs as enervating behavior, it has difficulty explaining how a person could escape the "downward spiral" once dissatisfaction reigns. In contrast, because MDT is based (in part) on the Murrayian notion that situationally unmet needs arouse motives that in turn energize behavior, it perhaps can handle Martha's situation. Martha might finally resolve to address her problems with her coworkers and with her family, eventually enabling her to return her focus to her earlier high-achievement concerns. Still, note that for this to happen, Martha would have to go against her own motive profile of being low on nAff, something that MDT would have trouble explaining. The SDT universalistic perspective, however, shows how this can happen, with its

assumption of a basic human need to experience relatedness, regardless of what a particular person is trying to do.

When we put the pieces together, we find that Martha has developed an MDT motivational style that is largely dependent on competence experiences to supply the overall level of need satisfaction that people require to thrive. Now that competence satisfaction is failing (in large part because of Martha's impoverished relational style), she is getting inadequate overall need satisfaction and is experiencing malaise. Will she spiral downward, or does she have the potential to escape the bounds of her habitual style to "break through" to better relations with others? SDT's universalistic perspective suggests that this positive possibility is always there because all people have the basic need for relatedness; however, this positive possibility can occur only if unfulfilled needs can be seen as potentially motivating corresponding behavior. Note that the behavior required might sometimes be quite small or fleeting: For Martha, it may be as simple as getting herself to make a single phone call to her mother or to a therapist to make an appointment. By obtaining (by her own initiative) this new level of support from the environment, she may start herself on the road back to higher need satisfaction—but this time, her total satisfaction will include relatedness as well as competence experiences, such that she is more balanced (Sheldon & Niemiec, 2006) and not as vulnerable to hardships in the achievement domain.

A TWO-PROCESS MODEL OF PSYCHOLOGICAL NEEDS

With this background, we are ready to consider the comprehensive model of psychological needs recently proffered by Sheldon (2011). Sheldon defined psychological needs as "evolved tendencies to seek out certain basic types of psychosocial experiences and to feel good and thrive when those basic experiences are obtained" (p. 552). This perspective views basic psychological needs as having a dual character: They are both innate behavioral motives that are present within everyone (although people may differ in the strengths of these motives, based on learning and genetics), and they are also innate

experiential nutriments that everyone requires to thrive (although people may vary in how much satisfaction they get, based on their current situation and personality structure). The two aspects of psychological needs serve as part of a loosely coupled functional system that operates by prompting people to pursue (typically) adaptive behavioral motives and also reinforces them when successful need-relevant behavior occurs. These two aspects of psychological needs will be considered only briefly, as some of the relevant ideas already have been covered. We then explain why it is essential to consider the two aspects separately.

Two Aspects of Psychological Needs

Again, one aspect of how psychological needs have been interpreted so far is to consider needs as *requirements*. Psychological need theories in particular focus on certain psychosocial experiences (or sets of experiences) that people are presumed to need. These theories all assume that a psychological need is a certain type, content, or character of psychosocial experience that people need to feel, presumably consciously, if they are to grow, develop, and be happy and well adjusted. As discussed, SDT is the most prominent requirement theory, asserting that people need to feel autonomous, competent, and related in their daily lives if they are to experience intrinsic motivation, healthy agency, and psychological well-being. The second aspect of psychological needs concerns needs as *motives*, as urges to go out and do certain things or pursue certain incentives. Again, MDT is the most prominent exemplar of this type of perspective, although, as discussed earlier, MDT does not assume that all people are equally motivated to get basic psychosocial experiences; instead, people are thought to vary in their quantity of motivation for achievement, affiliation, and power as a function of learning history and perhaps behavioral genetic influences.

One might assume that needs as requirements and needs as motives are simply two different ways of talking about the same phenomenon. For example, motive disposition theorists tend to use the terms "need for X" and "the motive disposition towards X" essentially interchangeably (McClelland, 1985). Assuming that motivated behavior and

psychological need satisfaction are the same thing or that they always co-occur, however, implies that unmet needs invariably arouse relevant motives and that aroused motives invariably satisfy unmet needs. For example, a person's unmet achievement need (feelings of incompetence) automatically would produce a relevant achievement motive (i.e., try harder to do this task well), which would automatically produce an achievement experience (trying to do well would produce success and felt competence). Obviously, such sequences can and do happen, but they do not *necessarily* happen. It seems that we need a way to distinguish between two different phases of an action sequence: an initial phase, in which a motive influences behavior, and a second phase, in which a behavior influences satisfaction. We also need a way of conceptualizing cases in which the two phases become decoupled, or fail to function well together. The TPM is designed to address these issues.

The Two-Process Dynamic

How do motives and requirements work to peoples' benefit, and how can requirements and motives become decoupled? Briefly consider the basic biological drives for food, water, air, and so on. Consistent with the TPM, these physical needs have two aspects: People automatically are motivated to pursue the physical needs for air, food, and water (after sufficient time has passed); and successful attainment of these needs is rewarded by specific positive experiences of relief, satiety, and quenching, which doubtless influence future behavior. For example, an office worker with an aroused hunger drive seeks a source of food, finds a hot dog cart on the sidewalk just outside the building, sates his hunger, and returns to that cart the next day and the day after. In this case, the coupled adaptive system is evident in the fact that unmet needs spawn drives that energize behavior, and the particular directed behaviors that successfully reduce those drives are presumably reinforced and strengthened (i.e., the behaviors become habits; Hull, 1943).

Still, even in the case of physical drives and requirements, motives and requirements can become decoupled. Hungry people may fail to eat available food, to the point of starvation (e.g.,

anorexics). Thus, missing physical requirements do not necessarily spur motivated behavior. Also, the behaviors undertaken to get nutrition (eating too many hot dogs) may not succeed in providing balanced nutrition. Thus, motivated behavior does not necessarily supply missing requirements.

This potential decoupling is likely even more true in the domain of psychological needs, which presumably are not as pressing (or as required) as physical needs. Thus, individuals (such as Martha) may not orient toward a particular experience, or may not try to get it, even though they need it. As a consequence, the need remains unsatisfied.

Another example of decoupling is when individuals develop compensatory impulses or urges (Deci & Ryan, 2000). For example, rather than try to connect with her coworkers or mend her relationship with her mother, Martha instead drinks at home alone or, in one case, engages in a brief and inappropriate sexual relationship. Although such activities might provide some "collateral satisfaction" (Deci & Ryan, 2000, p. 249), they do not really satisfy the thwarted basic needs and often lead to negative consequences. For example, chronic lack of need satisfaction in early childhood can lead to undue valuing of extrinsic aspirations such as wealth and prestige (rather than intrinsic aspirations such as growth and relatedness) in adulthood, which in turn negatively influences the well-being of the adult (Kasser, 2002).

In sum, missing psychological requirements do not necessarily spur relevant motivated behavior, and motivated behavior does not necessarily meet psychological requirements. This illustrates the importance of keeping the concepts of behavioral motives and resulting need satisfaction distinct. We believe that the best way to do this is to locate motive processes at the front end of a behavioral sequence and requirement processes at the back end of the sequence.

Figure 8.1 provides a graphic depiction of the two-process dynamic. According to this sequential model, thwarted needs can (but do not necessarily) arouse motives to do something about the problem. Such motives can energize behavioral efforts that are conceptualizable in terms of nested negative feedback or TOTE processes, described earlier

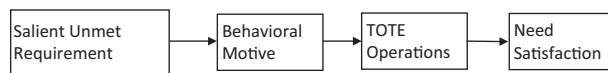


FIGURE 8.1. A regulatory process linking needs-as-requirements and needs-as-motives. TOTE = test–operate–test–exit sequence. Reprinted from “Integrating Behavioral-Motive and Experiential-Requirement Perspectives on Psychological Needs: A Two Process Model,” by K. M. Sheldon, 2011, *Psychological Review*, 118, p. 555. Copyright 2011 by the American Psychological Association.

(Carver & Scheier, 1998). The result of such behaviors can be positive experiences that reinforce the particular behaviors that were just enacted, such that those behaviors are more likely to be enacted in the future. Of course, the biological hunger-based “hot dog cart” example fits this model; more important, however, psychological need processes may work in the same way. Consider a student whose Friday night social plans fall through. He feels lonely, like a loser. He is not comfortable with this feeling and texts a friend. This friend is already busy so the student texts a second friend; as a result, he and the second friend attend a party together where he meets several new people, deriving a sense of relatedness and acceptance. This makes the student more likely to call the second friend again the next time he is lonely (not depicted in Figure 8.1).

Figure 8.1 is probabilistic in the sense of a path model; the links at each step are somewhat likely to occur, but they may not occur. It is in this sense that the two parts of the process can become decoupled. The lonely student simply might have stayed home, a case in which a salient unmet requirement would not have aroused a behavioral motive. Or, he may have gone to a strip club under duress and ended up feeling alienated from the friends he went with, such that the behavioral motive ultimately did not succeed in producing satisfaction.

Sheldon, Abad, and Hinsch (2011) provided tangible evidence for the sequence in Figure 8.1 in four studies of college student Facebook use. Study 1 examined the association of relatedness need satisfaction with the amount of Facebook use reported by students, attempting to address the question of whether this burgeoning social networking phenomenon is harmful or helpful with respect to satisfying peoples’ relatedness needs. In fact, relatedness need

satisfaction was uncorrelated with the amount of time students spend on Facebook. However, when the relatedness satisfaction measure was broken down into its positively worded component (“connectedness”) and negatively worded component (“loneliness;” these subscales were negatively correlated with each other), both subscales were associated positively with the amount of Facebook use. The other three studies in this research were designed to resolve the apparent paradox: How can high amounts of Facebook use be correlated with both connectedness and loneliness?

Sheldon, Abad, and Hinsch’s (2011) Study 2 was also cross-sectional, but it examined two possible mediators of the two positive relationships. Once again, connectedness and loneliness both were associated positively with the amount of Facebook use. The loneliness association, however, was fully mediated by a measure of “using Facebook to cope with loneliness” and the connectedness association was fully mediated by a measure of “relatedness satisfaction while actively using Facebook.” In other words, the two positive correlations apparently reflected two different processes at work: a coping process, in which lonely students turn to Facebook as an attempt to remedy the problem, and a reward process, in which frequent Facebook users are deriving positive satisfaction from use, presumably reinforcing and explaining that use. In terms of Figure 8.1, loneliness (salient unmet requirement) arouses a motive to take action (the first link in Figure 8.1), which in turn prompts the student to go on Facebook (the second link in Figure 8.1). Facebook is so popular, even among noncopers, because it actually provides rewarding experiences to many people, reinforcing and maintaining that use (the third link in Figure 8.1).

Sheldon, Abad, and Hinsch’s (2011) Study 3 was longitudinal, asking Facebook users to go “cold turkey” (i.e., to do without Facebook) for 48 hours. In the 48 hours after that, users could go back onto Facebook or not as they chose. Supporting the two-process dynamic and the third link of Figure 8.1, felt connectedness decreased during the initial 48-hour period. In other words, the rewarding behaviors (TOTE operations) were taken away and satisfaction declined. Supporting the first link in Figure 8.1,

measured increases in loneliness during that 48-hour period predicted a greater likelihood of going back onto Facebook in the second 48-hour period. When loneliness increased, a coping behavior was cued (go to Facebook) as a way of dealing with that feeling.

Sheldon, Abad, and Hinsch's (2011) Study 4 was also longitudinal, asking participants to set a Facebook reduction goal for the next week. Willing participants could try to cut back on their visits to the Facebook site, as much or as little as they wanted. Initial loneliness predicted setting a less ambitious reduction goal (relative to the participant's initial baseline) and furthermore predicted doing less well at whatever goal was set. In other words, the motivation induced by loneliness interfered with the Facebook reduction goal, prompting that a less ambitious reduction goal be set and then prompting less successful enactment of that goal. (Study 4 did not find that connectedness increased as a function of amount of Facebook use during the reduction period, perhaps because greater usage in this period corresponded with failing in one's goal, a feeling that likely detracted from the normal sense of satisfaction resulting from use.)

Using the TPM to Integrate SDT and MDT

Sheldon and Schöler (2011) recently applied the TPM in their attempt to combine MDT and SDT within a single empirical framework. As discussed earlier, Sheldon and Schöler (2011) measured participants' motive dispositions toward achievement and affiliation (the need for power was not considered because of its inexact mapping onto SDT's proposed need for autonomy, as discussed in the final section). These investigators then randomly assigned participants to pursue either three (self-listed) achievement goals or three (self-listed) affiliation goals during the course of the semester, making for an experimental longitudinal investigation. The question was, how would participants feel about their assigned goal type, as a function of their motive dispositions? Also, how would longitudinal changes in competence and relatedness need satisfaction affect changes in participants' well-being, as a function of their motive dispositions?

Sheldon and Schöler (2011) tested a "matching" hypothesis on the front end of the TPM's temporal sequence, predicting that participants would report more positive motivation and greater ownership of their goals when those goals matched their motive dispositions. In other words, consistent with MDT's individual differences perspective, when people randomly are assigned goals that happen to match their motive dispositions, they should be more motivated to pursue those goals.

This prediction also was consistent with an important postulate of the *self-concordance model of healthy goal striving* (Sheldon, 2004; Sheldon & Elliot, 1999). According to the self-concordance model, goals may or may not correctly represent a person's underlying personality. Proper goal selection is a difficult self-perceptual skill, in part because people's explicit theories about who they are may be "disconnected" from their implicit personality (as discussed earlier). Goals that well represent the underlying personality are said to be self-concordant goals (Sheldon, 2004).

Self-concordance is measured using an important SDT measurement technique: Namely, participants are asked to what extent they will be pursuing their listed goals for intrinsic reasons (because it will be interesting and enjoyable), identified reasons (because they believe in the goal, even if it is not interesting and enjoyable), introjected reasons (because they are forcing themselves to pursue the goal, to avoid guilt and shame), and external reasons (because they have to pursue the goal, due to external pressures and considerations). These four reasons are conceptualized as being located on an internalization continuum, ranging from automatically internalized (intrinsic) to internalized (identified) to partially internalized (introjected) to not at all internalized (external; Ryan & Deci, 2008). To have a self-concordant set of goals is to be pursuing those goals mostly for internalized reasons—that is, for intrinsic and identified reasons and not so much for introjected and external reasons (Sheldon & Elliot, 1999). The advantage of this measurement technique is that it does not require participants to know whether their self-listed goals match their implicit personality: Obviously, such self-reports might well be inaccurate. Instead, the technique

merely requires them to know whether the goals feel voluntary and unforced, rather than controlled and compulsory. Although the assumption that having a sense of internal causality for one's goals corresponds to goal-deep personality fit is plausible, it had not been directly tested.

As shown in the Figure 8.2 path model, two significant interactions were found in the data: Namely, need for achievement interacted with assigned goal type such that high nAch participants felt more self-concordant regarding assigned achievement goals, and need for affiliation interacted with assigned goal type such that high nAff participants felt more self-concordant regarding assigned relationship goals (see also Sheldon & Cooper, 2008). This provided new support for the self-concordance model and its notion that the self-concordance measure assesses person-goal fit. The finding also provided new support for MDT, by showing in a new way how preexisting motive dispositions influence peoples' varying responses to different motivational opportunities. Finally, this finding represented a novel integration of SDT and MDT because the MDT matching hypothesis was supported using an important SDT construct, namely, goal self-concordance. When the assigned goals matched peoples' motive disposition, they had a more internal perceived locus of causality for those goals.

A second contribution of the Sheldon and Schuler (2011) studies was to test the "back end" of the two-process temporal model. Again, SDT takes the universalistic perspective that all people need experiences of competence and relatedness, in the same way that all people need vitamins C and D (Ryan, 1995). According to this perspective, need satisfaction should have the same effects upon well-being regardless of a person's particular personality dispositions. Thus, a person high in nAch should get no greater boost in well-being from competence experiences than a person low in nAch, and the same for people high in nAff and relatedness experiences. This "nonmatching" hypothesis simply expects to find no interactions between motive dispositions and corresponding satisfactions to predict well-being. And indeed, despite an *N* of more than 500, Sheldon and Schuler (2011) found no such interactions. To return to Martha, who is low in nAff, she is not getting her relatedness needs met, but that does not mean she does not have this need. When she actually gets such experiences, she should benefit just as much, in terms of general well-being, as another person who is high in nAff. And, indeed, solving the problem of missing relatedness appears to be a key task for Martha, as she attempts to return to a happier state of mind.

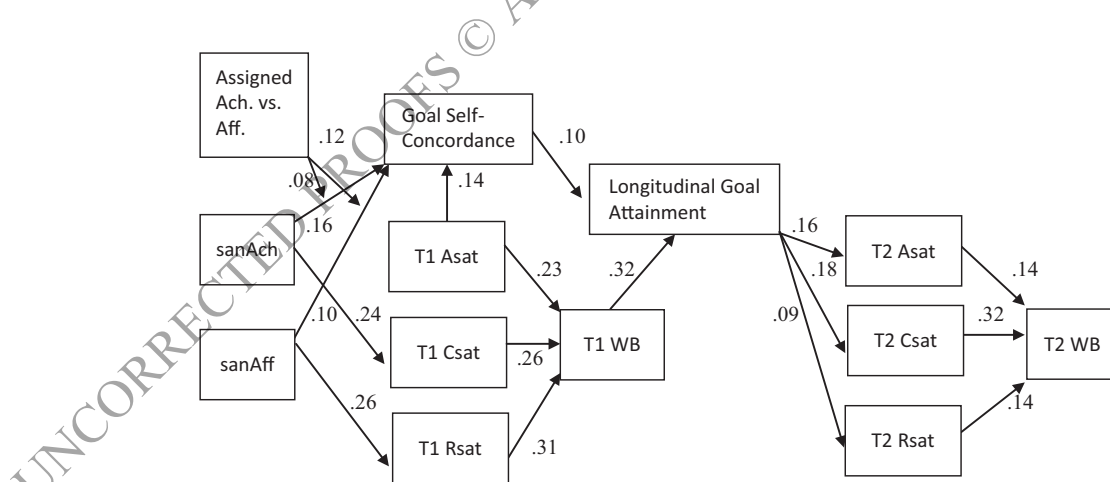


FIGURE 8.2. Conceptual path model guiding the Sheldon and Schuler (2011) studies. Test-retest and error covariance coefficients are omitted. All coefficients significant at $p \leq .05$. Ach = achievement; Aff = affiliation; Asat = autonomy satisfaction; Csats = competence satisfaction; Rsats = relationship satisfaction; WB = well-being. Reprinted from "Wanting, Having, and Needing: Integrating Motive Disposition Theory and Self-Determination Theory," by K. M. Sheldon and J. Schuler, 2011, *Journal of Personality and Social Psychology*, 101, p. 1109. Copyright 2011 by the American Psychological Association.

Still, further research suggests a potential qualification of SDT's universalistic assumption that all people benefit equally from need satisfaction. Schöler, Brandstätter, and Sheldon (2013) showed that whether the universalistic hypothesis (assuming that needs have equal importance for everyone) or the competing matching hypotheses (assuming that an individual with a high motive benefits more from corresponding need satisfaction) is true depends on the specificity of the measurement of the outcome variables. Two studies showed that participant's achievement motive interacted with felt competence when predicting *domain-specific* well-being and flow—for example, when participants referred to a specific mastery experience at work. When it comes to predicting *general* well-being and flow (participants rated their overall well-being), however, felt competence unfolded its effects without being moderated by the achievement motive.

Returning to the Martha example, because she is high in the dispositional need for achievement, Martha is likely to be more affected than most of her coworkers by momentary successes or failures on the job. In other words, the MDT matching hypothesis should be supported in the specific moment and domain of striving. The matching hypothesis, however, may not be supported in her life as a whole. These single episodes of need satisfaction and thwarting do not necessarily make her an overall happy or sad person. General well-being is multiply determined (Diener, 1994) and likely depends on many other types of contexts beyond the work context, and additionally it likely depends on the overall balance of the needs for autonomy, competence, and social relatedness (Sheldon & Niemiec, 2006).

Several other features of the Figure 8.2 model are worth pointing out. First, Time 1 autonomy, competence, and relatedness need satisfaction each uniquely predicted Time 1 well-being, and changes in autonomy, competence, and relatedness need satisfaction over the semester each uniquely predicted changes in well-being over the semester. These findings are also consistent with SDT's universalistic perspective, replicating similar findings reported elsewhere in the literature. Again, these relationships were not moderated by motive dispositions. Second, nAch was associated uniquely with

competence need satisfaction and nAff was associated uniquely with relatedness need satisfaction. This finding was discussed earlier in this chapter, and it supports the idea that strong motive dispositions typically succeed in getting the experience toward which they are oriented. In other words, motive dispositions, which presumably develop through positive reinforcement during childhood (McClelland, 1985), seemingly are continuing to be reinforced. This finding is consistent with the back end of the TPM, which says that motivated behaviors lead probabilistically to the corresponding experiences, which increase the likelihood of doing those behaviors again. Finally, in Figure 8.2, self-concordant goal pursuit can be seen to predict longitudinal goal attainment, which in turn predicts increases in need satisfaction. These findings replicate those of Sheldon and Elliot (1999), emphasizing the importance of selecting goals that well-represent one's personality. Taken together, the data presented in Figure 8.2 go a long way toward showing how “wanting,” via “striving,” gets to “having,” such that one's “needing” is fulfilled (Sheldon & Schöler, 2011).

Sheldon and Gunz (2009) have provided yet another source of support for the TPM. These investigators hoped to show that the autonomy, competence, and relatedness needs can function as motives that impel adaptive behavior, not just as experiential rewards that support health and well-being. In other words, Sheldon and Gunz (2009) hoped to strengthen the case for the existence of the three SDT needs using a different type of criterion for identifying needs than has been used by most past SDT research. To illustrate, Baumeister and Leary (1995) introduced nine criteria for identifying basic needs, in a preliminary section before developing their argument that there is a fundamental need for belongingness or relatedness. Specifically, they proposed that a “true” need should (a) produce effects readily under all but adverse conditions, (b) have affective consequences, (c) direct cognitive processing, (d) lead to ill effects (such as on health or adjustment) when thwarted, (e) elicit goal-oriented behavior designed to satisfy it (subject to motivational patterns such as object substitutability and satiation), (f) be universal in the sense of applying

to all people, (g) not be derivative of other motives, (h) affect a broad variety of behaviors, and (i) have implications that go beyond immediate psychological functioning. Baumeister and Leary (1995) cited evidence showing that the posited need for belongingness (relatedness, in SDT terminology) satisfied all nine criteria.

Table 8.1 contains these nine criteria and illustrates in a different way the differences in classical SDT and MDT. As can be seen, needs-as-motive theories (such as MDT) tend to focus (but do not *always* focus) on need criteria that involve showing that a motive affects behavior and cognition. In contrast, needs-as-requirements theories (such as SDT) tend to focus (but do not *always* focus) on the consequences of getting the designated experiences and on the notion that needs universally are required. Table 8.1 also illustrates that the TPM addresses both types of criteria in its depiction of psychological needs.

Again, Sheldon and Gunz (2009) attempted to support SDT's posited three needs using motive-type

criteria for identifying needs, rather than requirement-type criteria. In three studies, including one experimental and one longitudinal study, they showed that current, increased, or manipulated need satisfaction correlated negatively with "wanting" the corresponding type of experience. In other words, people high in current or manipulated competence satisfaction were less inclined to want more competence in their lives, whereas people low in competence satisfaction were more inclined to want competence in their lives (see the first link in Figure 8.1). The same pattern held for autonomy and relatedness. Again, this finding is difficult to explain if one assumes that unmet needs only tend to enervate motivated behavior, or only tend to direct behavior toward maladaptive compensatory motives.

An additional finding of Sheldon and Gunz (2009), which also supports the TPM, concerned the positively and negatively worded subscales of the three need satisfaction measures. Of course, good scale construction involves including

TABLE 8.1

Baumeister and Leary's (1995) Nine Criteria for Identifying Basic Psychological Needs

Actual needs	Motive theories (MDT)	Requirement theories (SDT)	Two-process model (TPM)
1. Produce effects readily under all but adverse conditions	X		X
2. Have affective consequences		X	X
3. Direct cognitive processing	X		X
4. Lead to ill effects (such as on health or adjustment) when thwarted		X	X
5. Elicit goal-oriented behavior designed to satisfy it	X		X
6. Are universal in the sense of applying to all people		X	X
7. Are not derivative from other motives	X	X	X
8. Affect a broad variety of behaviors	X		X
9. Have implications beyond immediate psychological functioning	X	X	X

Note. MDT = motive disposition theory; SDT = self-determination theory; TPM = two process model; X = criteria addressed by a theory. Reprinted from "Integrating Behavioral-Motive and Experiential-Requirement Perspectives on Psychological Needs: A Two Process Model," by K. M. Sheldon, 2011, *Psychological Review*, 118, p. 557. Copyright 2011 by the American Psychological Association.

negatively worded exemplars of the construct in question, as a way of overcoming response biases or other artifacts. Sheldon and Gunz (2009), however, found that the negatively worded need satisfaction subscales may have substantive meaning that goes beyond mere methodological difference. Specifically, when the positive and negatively worded subscales measuring “having” the experience of *X* were simultaneously entered into the equations predicting “wanting” *X*, only the negatively worded subscale (positively) predicted wanting *X*. Concretely, and consistent with the two Facebook relatedness satisfaction measures described earlier, loneliness predicted wanting more relatedness (see Figure 8.1), but (absence of) connectedness did not predict wanting more relatedness. Similarly, participants who agreed that they feel incompetent were more likely to want more competence, but not agreeing that they felt competent did not predict wanting more competence, with the same pattern holding for autonomy and its absence.

Notably, the finding that the presence of dissatisfaction may have different effects on outcomes than the absence of satisfaction is consistent with the recent findings of Bartholomew, Ntoumanis, and Thøgersen-Ntoumani (2010). These findings also are consistent with the integrated sequence illustrated in Figure 8.1, according to which salient unmet requirements (i.e., loneliness, incompetence, or controlledness) produce relevant motives (Murray, 1938), which may produce behaviors that finally may produce satisfaction. They also are consistent with the notion that “bad is stronger than good” (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), or that the presence of negative experiences can be more important than the absence of positive experiences, when it comes to getting people going in the short term. Indeed, this makes sense from both an evolutionary and a functional perspective: Why would motive-need systems evolve, unless they gave people some internally generated way of approaching adaptive behaviors and outcomes, perhaps especially when the external situation is not supportive of those outcomes?

Still, it is undoubtedly true that people whose needs are chronically unmet begin to suffer from rather serious debilitation, just as a person whose

need for vitamin C is chronically unmet becomes debilitated (i.e., he develops scurvy). The distinction between chronic and acute effects may help to resolve the seeming inconsistency of the current TPM with classical SDT. Radel, Pelletier, Sarrazin, and Milyavskaya (2011) recently provided evidence supporting this line of reasoning, showing that acute or situationally primed autonomy dissatisfaction evokes ameliorative efforts, whereas long-term dissatisfaction has more problematic effects. Radel et al. (2011) relied on Selye’s (1975) concept of the general adaptation syndrome in their interpretation of this finding, suggesting that unmet needs (alarm phase) initially might evoke restorative motives (resistance phase), which often succeeds in ameliorating the stress; when coping responses continue to fail, however, eventually a state of helplessness (exhaustion phase) sets in, often leading to compensatory and less adaptive motivations, or even to complete amotivation.

Importantly, Radel et al.’s (2011) distinction between acute and chronic effects allows both the notion that missing requirements are motivating and the notion that missing requirements are demotivating to be correct, and it also helps explain how motives and requirements can become decoupled as a result of chronic dissatisfaction and failed striving. Notably, Deci and Ryan (2000, p. 230) acknowledged that unmet relatedness, competence, or autonomy needs might evoke specifically tailored behavior, but they subsequently downplayed this idea in favor of the more traditional SDT perspective that unmet needs de-energize and degrade behavior. We suggest that Deci and Ryan’s (2000) perspective has emphasized the amotivating effects of chronic dissatisfaction and de-emphasizes the potentially motivating effects of acute dissatisfaction. We are not suggesting that thwarting other peoples’ needs is sound social policy; rather, we are suggesting that it is comforting that people do not necessarily become helpless when this happens, at least not at first.

FUTURE RESEARCH DIRECTIONS

This chapter presented a two-process perspective on psychological needs that combines and integrates two important motivation theories (MDT and SDT)

that mostly have been unconnected in previous research. We suggested that the independent development of these theories has some advantages because the theories are based on different images of humanity and different starting assumptions. When they nevertheless reveal similar and connectable results, this enhances our confidence that the two theories have been on the right track. Indeed, when two independently derived theories can be combined, the yield in new understanding can be great (as when Bohr discovered the wave-particle duality in quantum mechanics, or when Poincaré discovered the linkage between Fuchsian functions and non-Euclidean geometry in mathematics). This also might be the case for the independent development of theories on human needs.

How might SDT and MDT further enrich each other, now that the barriers between them are eroding? The following paragraphs address this question.

Applying the Implicit-Explicit Distinction to the SDT Needs

McClelland, Koestner, and Weinberger (1989) reviewed studies showing that different measures of one and the same motive (e.g., achievement motive measured using TAT and self-report) seldom are correlated significantly and inferred the existence of two independent motive systems that they called the implicit and the explicit motivational system. As discussed earlier, implicit motives are not represented consciously and are based on affect, whereas explicit motives are “self-reported” motives that reflect the individual’s conscious evaluations of themselves. Because implicit motives are unconscious, they have to be assessed by indirect measures such as the TAT (Murray, 1938) or its derivatives (e.g., PSE; see Schultheiss & Pang, 2007). In contrast, the explicit motivational system can be assessed directly, for example, by using self-report questionnaires (e.g., achievement scale of the PRF; Jackson, 1984) or by asking individuals about their personal goals (Brunstein et al., 1998).

In contrast, SDT has focused solely on explicit measures in measuring psychological need satisfaction, for example, by asking people how much they agree with items, such as “I feel like I am free to

decide for myself how to live my life” (autonomy), “People I know tell me I am good at what I do (competence), and “I really like the people I interact with” (relatedness). But is need satisfaction always consciously represented? If basic needs are evolutionary evolved, as suggested by the founding fathers of SDT (Deci & Ryan, 2000), and if consciousness is perhaps a more recently evolved brain potential (Dennett, 1991), then perhaps need satisfaction is not necessarily bound to consciousness. If basic need satisfaction were measured by some implicit means, as well as by explicit means, would different patterns of correlates be found for these two types of measure?

A related question is whether the conscious cognitive evaluation of need satisfaction (e.g., subjective reported relatedness) accounts for an individual’s well-being and other positive outcomes, or whether “real” need satisfaction (e.g., the objective quantity and quality of social relationships) is more important. For example, can a person who in an objective sense is well connected socially with other people, but who reports low feelings of social connectedness, feel worse than a person who reports feeling connected, but who is not, in some objective sense? The same question might be posed regarding the other two SDT needs—might actual and self-reported competence and autonomy diverge in some cases?

Because need satisfaction, to date, has been measured only by explicit self-report, the quality of assessment may be impaired by the disadvantages associated with self-reports (social desirability, memory effects, response tendencies). We conclude that an important goal of future research should be to develop implicit measures of basic need satisfaction that overcome these methodological problems and that help to answer the questions we have raised. It may turn out that the conscious experience of need satisfaction is what matters most, as according to SDT, needs are requirements of the conscious, agentic self. This, however, remains to be shown.

Motives in Society

McClelland (1961) and Winter (1993) showed that implicit motives not only predict the behavior of individuals but also predict the behavior-related outcomes of whole nations. In McClelland’s (1961)

book *The Achieving Society*, he assumed that the Protestant values of independence and mastery of challenges influence how families bring up their children and lead to a high need for achievement motive within children. Furthermore, McClelland (1961) assessed national achievement scores by using a procedure similar to the measurement of individual achievement scores: He content-analyzed written material. But rather than analyzing stories written by participants, he scored second-grade school books of different nations for achievement imagery. As hypothesized, he found that the national achievement score embedded in educational materials predicted economic growth (operationalized, for example, by national energy consumption) 25 years later.

McClelland (1975) suggested that not only economic growth but also war and peace could be predicted by national motives. He coded famous books, songs, and plays of countries for power and affiliation motivation and found that wars are more likely when power motive scores clearly predominate over affiliation motive scores. Winter (2007) continued McClelland's work and content-analyzed government statements, diplomatic documents, and political speeches of political crises that either escalated to war or were resolved peacefully. As expected, war was predicted by high-power motivation scores, whereas peace was related to affiliation motivation.

Could this principle of research be transferred to SDT? SDT research has analyzed basic need satisfaction in different nations—for example, in collectivistic and individualistic countries—and consistently has found that need satisfaction has equally positive well-being effects for everybody. It would be interesting to analyze, however, at the national level, whether inhabitants of countries that systematically support the basic needs for autonomy (e.g., grass-roots democracy), relatedness (e.g., political focus on social issues and care for people), and competence (e.g., good educational system that fosters competence experiences and reward accomplishment) report higher well-being than inhabitants of countries that focus less on these issues. Preliminary evidence (a 22-nation study by Sheldon, Cheng, & Hilpert, 2011) has suggested that such differences exist and that national well-being varies as a

function of national need satisfaction (see also Tay & Diener, 2011). The notion that supporting psychological need satisfaction should be a public policy goal for all societies is similar to the emerging idea that nations should focus on enhancing “gross national happiness” instead of gross national product (Brooks, 2008).

Understanding the Relations Between the Autonomy Need and the Power Motive

Much of the recent empirical research concerning the TPM focused on achievement or competence and affiliation or relatedness, given the obvious overlaps between these. What about SDT's third posited requirement, for autonomy, and MDT's third important motive disposition, for power? According to SDT, self-determination is the need to experience an internal locus of causality for one's behavior and to free oneself from the influence of external controlling forces. This enables flexibility in managing the interaction of oneself and the environment (Deci & Ryan, 1985, p. 38). When acting out of choice rather than external obligations, one's behaviors can be based on one's organismic needs and thereby can better support one's psychological health. From an evolutionary perspective, this seems highly adaptive and explains the universality of the need for autonomy.

Early researchers in MDT also were interested in an autonomy need. For example, Murray (1938, p. 82) mentioned the need for autonomy (“To resist influence or coercion. To defy an authority or to seek freedom in a new place. To strive for independence”) in his list of psychogenic needs, and McClelland (1975) mentioned power over oneself (“autonomy” in a broader sense) as one stage in his model of developmental stages of power orientations. DeCharms even developed an “origin” scoring system for running text to code for an implicit autonomy motive that is related closely to self-determination (DeCharms, 1968; DeCharms & Plimpton, 1992). More recent research on the need for power, however, has operationalized power primarily as a need to have *impact on others* (McClelland, 1985; Schultheiss, 2008). This concept does not overlap as well with SDT's proposed basic need for autonomy, as desires for social power sometimes

even may represent compensatory reactions to chronic *deficits* in autonomy. It is possible that MDT nPower researchers have failed to identify and focus on a true basic psychological need in this case or that MDT researchers should return to a conception of power motivation that is more focused on internal processes and less focused on external social processes that potentially are undermining relatedness need satisfaction with others. These linkages, however, remain to be made.

Understanding the Dynamics of Action and Satisfaction

Atkinson and Birch (1970) proposed a complex mathematical modeling approach addressing the dynamics of action. In a nutshell, their approach considers the waxing and waning of motive strengths over time as a function of cues and experiences found within the environment. Environments either support or block instigation and consummation of emerging motivational impulses, influencing the ongoing stream of behavior. How do autonomy, competence, and relatedness motives emerge and become satiated over time, as a function of salient opportunities and environments? How might motives become warped, or go extinct, if dissatisfaction is chronically present? How do chronic motive dispositions influence the generic processes shown to be associated with the SDT needs? All of these questions deserve attention.

CONCLUSION

The TPM of basic psychological needs and motives described in this chapter unifies two major theories and thus contributes to a “consilient” universe in which theories, formerly examined separately, ultimately are able to fit together (Wilson, 1998). We have attempted to integrate important propositions of SDT and MDT, showing how the two theories actually may complement each other. We also have shown that this new bridge between theories raises interesting and important new questions, which need to be addressed by future research. We are hopeful that the next generation of motivation researchers can take advantage of these opportunities.

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